

Table 8
East Yard Summary of Contaminated Media Areas and Volumes
Chevron Perth Amboy Refinery
Perth Amboy, New Jersey

Media	Contaminants / Areas	Area (SY)	Volume (CY)	Impacted SWMUs / AOCs
Hazardous Soil	TCLP Benzene > 0.5 mg/L	97	73	SWMU: 8
	TCLP Lead > 5 mg/L	777	1,554	SWMUs: 8 and 10; AOCs: 16 and 46
	Total	874	1,627	
Non-Hazardous Soil	Lead > 800 mg/kg	1,630	6,190	SWMUs: 8 and 42; AOCs: 14, 16, 31 and 46
	Benzene > 100 mg/kg	1,812	1,359	SWMU: 8; AOC: 16
	Benzene 13 - 100 mg/kg	10,627	15,090	SWMU: 8; AOCs: 14, 16, 31, 37, 38, 39 and 46
	Total	14,069	22,639	
Arsenic Impacted Soil	Arsenic > 20 mg/kg	41,908	NE	AOCs: 6B, 29, 45 and 46
Benzo(a)pyrene > 10 mg/kg Impacted Soil	Benzo(a)pyrene > 10 mg/kg	586	586	AOCs: 16 and 29
Groundwater	Benzene 1 - 100 ug/L	81,805	261,776	SWMUs: 8, 10 and 42; AOCs: 14 and 16
	Benzene > 100 ug/L	9,510	30,432	SWMUs: 8, 10 and 42; AOCs: 16 and 31
	Lead 5 - 50 ug/L	16,371	52,387	SWMU: 42; AOC: 16
	Lead > 50 ug/L	5,640	18,048	SWMUs: 8 and 42; AOC: 16
	Total	113,326	362,643	

Notes:

1. SY = Square Yard
2. CY = Cubic Yard
3. NE = Not Estimated
4. SWMU = Solid Waste Management Unit
5. AOC = Area of Concern
6. The arsenic soil contamination areas in the East Yard at concentrations > 20 mg/kg were estimated in the Supplemental RCRA Facility Investigation (SRFI) Report.
7. The estimated areas and volumes of contaminated soil were based on the soil principal contaminants of concern (PCOCs) distributions presented in the CM: Pre-Design Investigation (PDI) Results Report. This Report includes historical and RFI soil data, as well as SRFI and CMS soil data
8. The unconfined saturated zone thickness of each yard used to calculate the volume of groundwater to be managed was estimated to be 9.6 ft based on the boring log observations and cross-sections shown in the CMS PDI Work Plan figures.
9. The SWMUs and AOCs impacted by soil and groundwater PCOCs were identified based on their overlapping with the corresponding PCOC contours presented in Figures 2 through 4 of the CMS Final Report
10. The PCOCs were contoured from their applicable regulatory standard or criteria as follows: 1) benzene was contoured from 13 mg/Kg, its NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDSCC); 2) lead was contoured from 800 mg/Kg, its NJDEP Non-Residential Direct Contact Soil Cleanup Standard (NRDSCS); 3) arsenic was contoured from 20 mg/Kg, its NJDEP NRDSCC; 4) benzo(a)pyrene was contoured from 10mg/Kg, its CMS recommended action level for active remediation; 5) TCLP benzene was contoured from 0.5 mg/L, its RCRA Characteristic Hazardous Waste Regulatory Level; 6) TCLP lead was contoured from 5 mg/L, its RCRA Characteristic Hazardous Waste Regulatory Level; 7) benzene in groundwater was contoured from 1 ug/L, its NJDEP Groundwater Quality Standard (GWQS); and 8) lead in groundwater was contoured from 5 ug/L, its NJDEP GWQS